

REMARKS

The Office Action mailed May 17, 2001 has been reviewed and carefully considered. Claim 1 has been amended. Claims 1-10 are pending in this application, with claim 1 being the only independent claim. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

In the Office Action mailed May 17, 2001, claims 1-10 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter not described in the specification. The Examiner states that the subject matter of having a sole passage that communicates the working chambers is not disclosed. Claim 1 is amended to recite a sole passage through the piston. This comports with the interpretation of the claims by the Examiner. In view of the amendments and the above remarks, it is respectfully submitted that the rejection of claims 1-10 under 35 U.S.C. §112, first paragraph is now overcome.

Claim 5 stands rejected under 35 U.S.C. §112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner states that the term "the actuator" in line 1 of claim 5 lacks antecedent basis. Claim 5 has been amended to depend from claim 2 which provides antecedent basis for the actuator. Therefore, it is respectfully submitted that the rejection under 35 U.S.C. §112, second paragraph, is now overcome.

Claims 1 and 3-10 stand rejected under 35 U.S.C. §102 as anticipated by U.S. Patent No. 4,850,461 (Rubel). Claim 3 stands rejected under 35 U.S.C. §103 as unpatentable over Rubel in view of U.S. Patent No. 3,726,368 (Taylor). Claims 1-10 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 5,533,597 (Nezu).

Before discussing the cited prior art and the Examiner's rejections of the claims in view of that art, a brief summary of the present invention is appropriate. The present invention is directed to a vibration damper having a cylinder and a piston axially movably arranged therein. The piston divides the cylinder into first and second working spaces which are filled with a damping fluid. First and second non-return valves are arranged in the piston for respectively conducting damping fluid in the compression and rebound directions of the vibration damper. A damping valve is arranged in series with the first and second non-return valves and is externally actuatable for varying the damping characteristics thereof. The damping valve includes a valve body and a valve seat with a flow path defined therebetween. Since the damping valve and the first and second non-return valves are arranged in series, the damping fluid is required to flow through the flow path of damping valve and one of the first and second non-return valves whenever damping fluid is conducted from one working space of the cylinder to the other in the compression and rebound directions of the vibration damper.

Independent claim 1 has been amended to recite that the damping valve has a valve body and a valve seat which define a flow path therebetween. Furthermore, independent claim 1 has been further amended to state that "said damping fluid is required to flow through said flow path of said damping valve when damping fluid is exchanged between said two working spaces in the rebound and the compression directions of the vibration damper".

It is respectfully submitted that independent claim 1 is not anticipated by Rubel because Rubel fails to disclose a valve seat and that "said damping fluid is required to flow through said flow path of said damping valve when damping fluid is exchanged between said two working spaces in the rebound and the compression directions of the vibration damper". In contrast to the present invention, Rubel discloses a shock absorber having two separate flow paths

20, 21 between the two working spaces of a cylinder. A control element 26 is arranged for separately controlling flow in each of the separate flow paths 20, 21. The control element 26 has two separate restrictions 36, 37 for separately acting on the respective separate flow paths 20, 21. Therefore, Rubel actually teaches away from using the same flow path in both directions. Furthermore, the control element 26 is arranged for sliding in a guide bore 25 which intercepts the flow paths 20, 21. Accordingly, Rubel also fails to disclose a valve seat from which a valve body is lifted.

In view of the above amendments and remarks, it is respectfully submitted that independent claim 1 is allowable over Rubel.

It is respectfully submitted that independent claim 1 is allowable over Nezu because Nezu fails to teach or suggest “a damping valve comprising a valve body and a valve seat defining a flow path therebetween” and that “said damping fluid is required to flow through said flow path of said damping valve when damping fluid is exchanged between said two working spaces in the rebound and the compression directions of the vibration damper”, as recited in independent claim 1.

Nezu discloses a suspension control device having first and second non-return valves 23, 24 and a plate having openings 26, 27 respectively corresponding to the non-return valves 23, 24. Accordingly, Nezu also discloses two separate flow paths for the compression and rebound strokes of the suspension device. The separate paths of Nezu fails to teach or suggest the claimed damping valve having a valve body and a valve seat which define a flow path through which damping medium flows in both the compression and rebound directions. Accordingly, it is respectfully submitted that independent claim 1 is allowable over Nezu.

Dependent claims 2-10, being dependent on independent claim 1, are allowable for at least the same reasons that independent claim 1 is allowable.

The application is now deemed to be in condition for allowance and notice to that effect is solicited.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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VERSION WITH MARKINGS SHOWING CHANGES

IN THE CLAIMS:

Amend claims 1, 5 and 10 as follows:

1. (Twice Amended) A vibration damper with variable damping force, comprising:

a working cylinder filled with damping medium;

a piston fastened to a piston rod arranged in an axially movable manner in said working cylinder and dividing the working cylinder into two working spaces;

first and second non-return valves arranged in said piston for respectively providing a damping force for the rebound and compression directions of the vibration damper; and

a damping valve comprising a valve body and a valve seat defining a flow path therebetween, said damping valve being arranged in one of said piston and said piston rod having a variable damping action and arranged in series with each of said first and second non-return valves, thereby acting in both said rebound and compression directions of the vibration damper, wherein said damping valve in series with said first and second non-return valves comprise a sole passage for said damping medium through said piston between said two working spaces such that said damping fluid is required to flow through said flow path of said damping valve when damping fluid is exchanged between said two working spaces in the rebound and the compression directions of the vibration damper.

5. (Amended) The vibration damper of claim [4] 2, wherein said actuator for said damping valve comprises an electromagnet.

10. (Amended) The vibration damper of claim 9, wherein said [damping valve comprises a] valve body [that] is precontrollable to a precontrolled setting in one of said rebound and compression directions and directly controllable via an actuator in the other of said rebound and compression directions.